Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

VII SEMESTER B.TECH. (CIVIL ENGINEERING)
END SEMESTER EXAMINATIONS, NOV/DEC 2018
SUBJECT: ENVIRONMENTAL IMPACT ASSESSMENT AND AUDITING [CIE 4021]
REVISED CREDIT SYSTEM
(27 /11 /2018)

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer ALL the questions & missing data may be suitably assumed

1A.	Describe fanning and fumigating plumes with the help of a diagram	**(04)**	**CO1, CO3**
1B.	Tabulate a descriptive checklist with potential mitigation strategies for a highway project in Manipal.	**(06)**	**CO1, CO3**
2A.	Explain the following terms: 1. Vadose zone 2. Liability Audit 3. Management Audit 4. Scale Alternatives	**(04)**	**CO1, CO3**
2B.	A factory emits 30 g/s of S02 at H height. The wind speed is 2 m/s on a moderately sunny day. Calculate the concentration of the pollutant at the center line and at a point 50m to the side and 30m below the center line at a distance 500m away.	**(06)**	**CO1, CO3**
3A.	Explain discrete and incremental types of alternatives. Highlight any 4 key issues that must be considered while identifying alternatives.	**(04)**	**CO1, CO3**
3B.	Explain the terms dispersion and sorption and their combined influence on the advective flow of pollutants in soil from a slug release source with the help of diagram	**(06)**	**CO1, CO3**
4A.	Explain direct, indirect and cumulative impacts. Please explain the importance of a "no go" alternative in an EIA report.	**(04)**	**CO2, CO5**
4B.	Explain the role of various stakeholders (environmental practitioner, proponents and public) in the identification and evaluation of alternatives.	**(06)**	**CO2, CO3**
5A.	With four points, explain the purpose of interdisciplinary team discussion In the setting of the initial list of factors.	**(04)**	**CO2, CO4**
5B.	Area 1: Species | Number of individuals Animal 1 | 6 Animal 2 | 4 Animal 3 | 1 Animal 4 | 3	**(06)**	**CO1, CO3**

Area 2:

Species	Number of individuals
Animal 1	3
Animal 2	4
Animal 3	10
Animal 4	3
Animal 5	1
Animal 6	1

Compute Shannon and Simpson index for the following areas and comment on which of these areas is more biologically diverse